


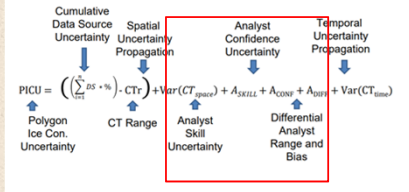
IICWG XIX  
Helsinki  
24. syyskuuta 2018



## DICSSC 2018 Update

Co-Chairs  
Penny Wagner (NIS)  
Chris Readinger (NIC)  
Alvaro Scardilli (SHNA)

### Analysts Uncertainty Algorithm



$$PICU = \left( \sum_{i=1}^n \sigma_i^2 \cdot \% \right) \cdot CT_r + \text{Var}(CT_{range}) + A_{SKILL} + A_{CONF} + A_{DIFF} + \text{Var}(CT_{time})$$

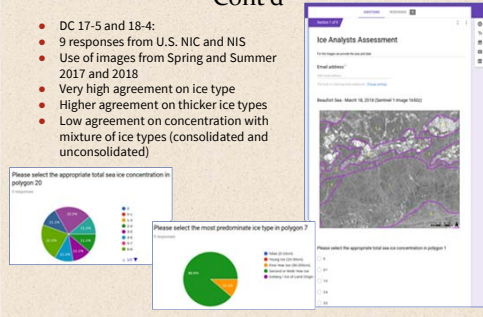
Each element of the formula represent normalized error factors that accumulate range from 0-100 (0 = no uncertainty)

### Looking back

- IICWG XVII (2016) began with 41 open Action Items
  - 50% completed
  - 25% moved
  - 5 cancelled, 5 open
- IICWG XVIII (2017)
  - Focused on fewer items
  - More substance
  - 10 Action Items

### Analysts Uncertainty Algorithm Cont'd

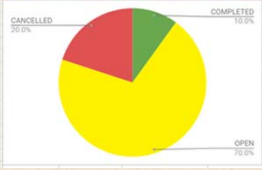
- DC 17-5 and 18-4:
- 9 responses from U.S. NIC and NIS
- Use of images from Spring and Summer 2017 and 2018
- Very high agreement on ice type
- Higher agreement on thicker ice types
- Low agreement on concentration with mixture of ice types (consolidated and unconsolidated)



### Current ACTION ITEMS

- 7 Open AIs
  - 3 for large project for ice chart confidence level.
  - One carryover from 16.
  - Others include: Ice analyst training, sea ice portrayals, product guide

COMPLETED	1	10.0
OPEN	7	70.0
MOVED	0	0.0
CANCELLED	2	20.0



### WMO Ice Analyst/Forecaster Competency Requirements

- DC 18-3: Generate overview plan for ice analyst training to include GIS, analysis basics, WMO regulations, Polar Code, and basic knowledge required for position. Draft for use now and as possible input for future certification through WMO. For Training for Polar code.
  - Awaiting WMO acceptance of regulatory requirements.
  - First draft of analyst competencies completed.
  - Forecaster competencies will be specific to ice centers and customers, but baseline can still be written.
  - CIS, NIS, and NIC will finalize first draft to distribute to Europe and SH.

### DICSSC for Southern Hemisphere

- Publishing the ice charts through an interactive web map, like SOOSmap.
- Ensuring ice charts (and input data) are well-curated and preserved.
  - Data centers that adhere to FAIR (Findable, Accessible, Interoperable, Reusable).
  - Increased visibility for SH use
- Publishing upcoming voyage plans in DueSouth, the SOOS database of upcoming expeditions to the Southern Ocean.
  - IICWG committee has an AI to develop a database that can be used to plan for remote sensing needs to support upcoming ship operations in the Southern Ocean.
  - Inquiry from DICSSC?
- IICWG needs in terms of observational data
  - SOOS has a working group tasked with designing a system of sustainable observation of key ocean variables.
  - Identify ways that the IICWG's recommendations about data requirements gets fed into the SOOS design work.
  - How can we track small icebergs in the vastness of the Southern Ocean.

### Looking Ahead

- Include action items that are:
  - Directly relevant to what we are doing as individual institutions and as a group
  - Feasible to accomplish
  - Delegated to allow for ownership and leadership roles for those working on the ground
- What are the most important data related challenges?
  - Data accessibility: Is the data we provide easily accessible and understandable?
    - Example of request from SH
    - For products being developed for operations, how do you think end-users understand them?
  - Standard format
    - Where is the disconnect on standard format?
- Where do machine learning and big data fit in?
- Ingestion of ice observations and archiving them

### Agenda For IICWG XIX

- Review current AIs for edit, rewrite, continuance or removal.
- Discussions with ASRSC to collaborate or divide tasks.
- Discuss new ideas for this year's AIs, refocus older AIs.
- Focus the AIs for coming year.
- Nominate new Co-Chair(s).
- Monday
  - 1530-1615
  - 1615-1700 (Joint session w/ASRSC)
- Thursday
  - 0830-930 (Joint session w/ASRSC)
  - 0930-1030
- Friday
  - 0830-1000



# DICSSC ACTION ITEMS STATUS

Last Updated 7 September 2018

## Data, Information and Customer Support Standing Committee

Co-Chairs: Chris Readinger (NIC) / Penny Wagner (NIS) / Alvaro Scardilli (SHN)

- DC 16-11 Revised at IICWG-XVIII: Share information on sharing point for source codes and add python/GNU Fortran codes that can be used in SIGRID-3 to S411 standard.  
Responsible: Nick Hughes, A. Kangas, V. Smolyanitsky  
Deadline: IICWG 2018  
Status: CANCELLED. Bitbucket deemed too heavy a tool for our purposes. Recommend to continue with e-mail and direct communication.
- DC 16-13 Evaluate method to open data policy for ice chart information from Australia (i.e. limitations, legality, etc.).  
Responsible: S. Carpentier, J. Lieser  
Deadline: IICWG-XIX  
Status: OPEN. Still uncertainty among SH services about this possibility.
- DC 17-3 Create minimum metadata requirements for Sigrid-3, S411 and WIS.  
Responsible: J. Holfort  
Deadline: 15 Dec 2016 – in time for ETSI.  
Status: CLOSED. Requirements are already set. No one seems to use WIS. .
- DC 17-5 Using the parameters from DC17-4, develop a draft method to estimate the ice chart confidence level and present at next IICWG.  
Responsible: S. Helfrich, P. Wagner, A. Kangas  
Deadline: IICWG 2017  
Status: OPEN. Sean Helfrich gave draft method presentation in Bergen. On-line assessment tool has been distributed and completed by analysts from NIC and NIS.
- DC 17-12 Develop a template for a product guide draft for users. Define what should be included and a proposal for collection of the data. Insight on Polar Code should be considered. All committee members will be included for input.  
Responsible: P. Wagner, L. Kelley, and A. Fleming, J. Holfort  
Deadline: IICWG 2018  
Status: OPEN
- DC 18-1 Update IAW-4 and 5 reports to JCOMM web site.  
Responsible: V. Smolyanitsky, A. Kangas, C. Readinger  
Deadline: 30 Dec 2017  
Status: CLOSED. IAW4 Final report sent to Vasily. Recommendations to come out of IAW5 are on JCOMM website.



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- DC 18-2 Develop potential sea ice portrayals taking into account the possibilities of electronic display systems for scaling, symbol merging, etc. and including possibilities to combine the hatching and the color schema and to better incorporate melting  
Responsible: J. Holfort, K. Qvistgaard., G. Wachira, A. Kangas  
Deadline:  
Status: OPEN. Portrayals for Polaris finished. Need for icebergs and biologists (ongoing). Scaling for icebergs needed and IIP will send out information on all icebergs. Jürgen will include some portrayals in Ice Logistics Portal
- DC 18-3 Generate overview plan for ice analyst training to include GIS, analysis basics, WMO regulations, Polar Code, and basic knowledge required for position. Draft for use now and as possible input for future certification through WMO. For Training for Polar code.  
Responsible: C. Panowicz, P. Wagner, A. Kangas, N. Moodie, Scott Graham, Catalin Tita  
Deadline: IICWG 2018  
Status: OPEN. Awaiting WMO acceptance of regulatory requirements. First draft of sea ice analyst competencies is finished. Forecaster competencies will be specific to ice centers and customers, but baseline can still be written. CIS, NIS, and NIC will finalize first draft to distribute to Europe and SH.
- DC 18-4 Work with the analyst to characterize the impacts that subjectivity, confidence and skill have on uncertainty estimates. Conduct an inter-comparison of analysis and address topic at next IAW meeting (WHEN?).  
Responsible: S. Helfrich, P Wagner, A Kangas  
Deadline: Next Ice Analysts Workshop  
Status: OPEN. Use IAW workshop in Riga to characterize subjectivity. Penny to talk to Antti to get more information about this workshop and include this action item into the agenda. Sent email March 26.
- DC 18-5 Construct 2 studies or find of modeller and navigator user needs for ice chart uncertainty. Present findings at IICWG meeting 2018.  
Responsible: S. Helfrich, P Wagner, A Kangas, Scott Graham, Jürgen Holfort, Antti Kangas  
Deadline: IICWG 2018  
Status: OPEN. Outcome of Sea Ice Prediction Network Stakeholder Workshop, January 2018 from Arctic Frontiers available from EU Polarnet. Document explains stakeholder feedback on the usage of models and sea ice forecasts. EOS paper in progress. See: [https://www.eu-polarnet.eu/fileadmin/user\\_upload/www.eu-polarnet.eu/Members\\_documents/Deliverables/WP4/D4-](https://www.eu-polarnet.eu/fileadmin/user_upload/www.eu-polarnet.eu/Members_documents/Deliverables/WP4/D4-)



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[11 Minutes of stakeholder dialogue at Arctic Frontiers Conference.pdf.](#)